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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,314	10/27/2000	David Carrel	4906.P012	6295

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EXAMINER

HAN, CLEMENCE S

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/698,314

Applicant(s)

CARREL, DAVID

Examiner

Clemence Han

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37, CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1, 2, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Bromley et al. (US Patent 6,658,021).

In regarding to claim 1 and 19, Bromley teaches a method comprising:  
receiving a number of data packets on a real circuit and a number of virtual circuits (Column 3 Line 59-62), wherein the number of virtual circuits are within the real circuit such that the number of data packets on the real circuit have a first protocol encapsulation 312 and the number of data packets on the number of virtual circuits have a second protocol encapsulation 324; deencapsulating the number of data packets having the first protocol encapsulation; deencapsulating the number of data packets having the second protocol encapsulation (Column 7 Line 11-15, Column 7 Line 1-4); and forwarding the number of data packets having the first protocol

encapsulation and the second protocol encapsulation based on an address stored in the number of data packets (Column 7 Line 15-21, Column 7 Line 1-4).

In regarding to claim 2 and 20, Bromley teaches the number of data packets as Internet Protocol (IP) packets (Column 4 Line 21-25).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3-18 and 21-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bromley et al. in view of Voit et al. (US Patent 6,424,657).

In regarding to claim 3 and 21, Bromley teaches the first protocol encapsulation as IP 312. Bromley, however, does not teach the first protocol encapsulation as IP over Ethernet. Voit teaches the first protocol encapsulation as IP over Ethernet (Figure 2). It would have been obvious to one skilled in the art to use Bromley for IP over Ethernet protocol as taught by Voit in order to incorporate higher data rate.

In regarding to claim 4 and 22, Voit teaches the second protocol encapsulation as a Point-to-Point Protocol over Ethernet (Figure 2).

In regarding to claim 5 and 23, Bromley teaches a method comprising: receiving a number of Internet Protocol (IP) packets 312 on a real circuit, each IP packet having an IP address, receiving a number of IP packets within a Point-to-Point Protocol (PPP) 324 on at least one virtual circuit, wherein each of the number of IP packets within the PPP includes a PPP header and an IP address, wherein the at least one virtual circuit runs within the real circuit (Column 3 Line 59-62); removing the PPP header from the number of IP packets within the PPP (Column 7 Line 11-15, Column 7 Line 1-4); and forwarding the number of IP packets and the number of IP packets within PPP based on the IP address (Column 7 Line 15-21, Column 7 Line 1-4). Bromley, however, does not teach IP over Ethernet nor IP within PPP over Ethernet. Voit teaches IP over Ethernet and IP within PPP over Ethernet (Figure 2). It would have been obvious to one skilled in the art to use Bromley for IP over Ethernet protocol and IP within PPP over Ethernet protocol as taught by Voit in order to incorporate higher data rate.

In regarding to claim 6 and 24, Voit teaches IP packets over Ethernet and the number of IP packets within the PPP over Ethernet are encapsulated in an Asynchronous Transfer Mode (ATM) protocol layer (Figure 2).

In regarding to claim 7 and 25, Voit teaches removing the ATM protocol layer from the number of IP packets over Ethernet and the number of IP packets within the PPP over Ethernet (Column 20 Line 1-5).

In regarding to claim 8 and 26, Bromley teaches calculating the number of IP packets within the PPP that are being received from the at least one virtual circuit (Column 14 Line 52-54). Bromley, however, does not teach IP within PPP over Ethernet. Voit teaches IP within PPP over Ethernet (Figure 2). It would have been obvious to one skilled in the art to use Bromley for IP within PPP over Ethernet protocol as taught by Voit in order to incorporate higher data rate.

In regarding to claim 9 and 27, Bromley teaches performing rate limiting (Column 14 Line 50).

In regarding to claim 10 and 28, Bromley teaches a method comprising: receiving a number of different data packets on both a real circuit and a number of virtual circuits running within the real circuit (Column 3 Line 59-62); recursively performing the following for each of the number of different data packets: upon determining that a received data packet is an Internet Protocol (IP) packet 312 on the real circuit, forwarding the IP packet based on an IP address stored in the IP packet (Column 7 Line 11-15, Column 7 Line 1-4); and upon determining that a received data packet is an IP packet within a Point-to-Point Protocol (PPP) 324 on

one of the number of virtual circuits, removing a PPP header from the data packet (Column 7 Line 11-15, Column 7 Line 1-4) and forwarding the IP packet based on an IP address stored in the IP packet (Column 7 Line 15-21, Column 7 Line 1-4). Bromley, however, does not teach IP over Ethernet nor IP within PPP over Ethernet. Voit teaches IP over Ethernet and IP within PPP over Ethernet (Figure 2). It would have been obvious to one skilled in the art to use Bromley for IP over Ethernet protocol and IP within PPP over Ethernet protocol as taught by Voit in order to incorporate higher data rate.

In regarding to claim 11 and 29, Voit teaches IP packets over Ethernet and the number of IP packets within the PPP over Ethernet are encapsulated in an Asynchronous Transfer Mode (ATM) protocol layer (Figure 2).

In regarding to claim 12 and 30, Voit teaches removing the ATM protocol layer from the number of IP packets over Ethernet and the number of IP packets within the PPP over Ethernet (Column 20 Line 1-5).

In regarding to claim 13 and 31, Bromley teaches calculating the number of IP packets within the PPP that are being received from the at least one virtual circuit (Column 14 Line 52-54). Bromley, however, does not teach IP within PPP over Ethernet. Voit teaches IP within PPP over Ethernet (Figure 2). It would have

been obvious to one skilled in the art to use Bromley for IP within PPP over Ethernet protocol as taught by Voit in order to incorporate higher data rate.

In regarding to claim 14 and 32, Bromley teaches performing rate limiting (Column 14 Line 50).

In regarding to claim 15, Bromley teaches network element comprising: a number of input/output (I/O) cards 59 coupled to a number of real circuits, wherein each of the number of real circuits include at least one virtual circuit (Column 3 Line 59-62), the number of I/O cards to receive a number of Internet Protocol (IP) packets 312 on the real circuit and to receive a number of IP packets within a Point-to-Point Protocol (PPP) 324 on the at least one virtual circuit; and a forwarding card 62 having an IP address table, the forwarding card to receive the number of IP packets from the number of I/O cards and to forward the IP packets based on the IP address table 176 (Column 7 Line 1-4). Bromley, however, does not teach IP over Ethernet nor IP within PPP over Ethernet. Voit teaches IP over Ethernet and IP within PPP over Ethernet (Figure 2). It would have been obvious to one skilled in the art to use Bromley for IP over Ethernet protocol and IP within PPP over Ethernet protocol as taught by Voit in order to incorporate higher data rate.



In regarding to claim 16, Bromley teaches a control card 16 having a database of configuration information, the configuration information used to configure the forwarding card and the number of I/O cards (Column 5 Line 44-49).

In regarding to claim 17, Bromley teaches the number of I/O cards 59 to determine the number of IP packets within the PPP that are being received from the at least one virtual circuit (Column 14 Line 52-54). Bromley, however, does not teach IP within PPP over Ethernet. Voit teaches IP within PPP over Ethernet (Figure 2). It would have been obvious to one skilled in the art to use Bromley for IP within PPP over Ethernet protocol as taught by Voit in order to incorporate higher data rate.

In regarding to claim 18, Bromley teaches the number of I/O cards 59 performing rate limiting (Column 14 Line 50).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to the deencapsulating data in general.

U.S. Patent 6,614,809 to Verma et al.

U.S. Patent 6,618,397 to Huang

U.S. Patent 6,578,084 to Moberg et al.

U.S. Pub. 2003/0210697 to Mercier

U.S. Pub. 2001/0030977 to May

U.S. Pub. 2002/0097728 to Hinderks et al.

U.S. Pub. 2002/0019875 to Garrett et al.

U.S. Pub. 2002/0010782 to Hoebeke et al.

U.S. Pub. 2003/0154297 to Suzuki et al.

U.S. Pub. 2002/0147826 to Sultan

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clemence Han whose telephone number is (703) 305-0372. The examiner can normally be reached on Monday-Friday 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. H.

Clemence Han  
Examiner  
Art Unit 2665



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